

Tetanus

Agent: Toxin secreted by the bacteria *Clostridium tetani*

Mode of Transmission: The bacteria enter the body through a break in the skin, usually when a wound, either major or minor, is infected by contaminated soil, dust, or animal or human feces. Person-to-person transmission does not occur.

Signs/Symptoms: A descending pattern of painful muscle contractions, particularly of the neck muscles, difficulty swallowing and abdominal rigidity.

Prevention: Tetanus vaccine is available as part of the diphtheria/tetanus/pertussis (DTaP) vaccine for children and the combination tetanus/diphtheria/pertussis (Tdap) vaccine for adolescents and adults. One dose of Tdap should be given at 11 to 12 years of age with booster doses of tetanus/diphtheria (Td) every ten years thereafter.

Other Important Information: Tetanus was made nationally notifiable in 1947. Since then, incidence of tetanus has declined over 95% and tetanus-related deaths have declined over 99%. Production of tetanus toxoid (TT) began in 1924 and was initially used for armed services personnel during World War II. It was included in the routine childhood immunization schedule in the late 1940s. Universal vaccination, including boosters for adolescents and adults, along with use of tetanus antitoxin for wound management, is primarily responsible for the decline of cases and death from tetanus. The case-fatality rate of tetanus ranges from 10% to over 80% and depends on patient age, length of incubation period, and quality of and access to care, especially access to intensive care unit resources and tetanus immune globulin. Sporadic cases of tetanus continue to occur in adults, especially in people who were never vaccinated or did not receive ten-year booster shots. Proper wound management is necessary for all wounds, even wounds that appear to be minor, as a higher proportion of patients with tetanus in recent years had minor wounds.

In 2016, one case of tetanus was reported in Virginia. The case occurred in a male child from the 1-9 year age group who had not been fully vaccinated. Previously, two cases were reported in Virginia in 2013 and one case was reported in 2012. The five-year average for tetanus is less than one case per year.